

CLAIMS

What is claimed is:

- 1 1. A modular multiple-mode gas-fueled assembly, comprising:
 - 2 a base grate; and
 - 3 a holder arranged to rest within the base grate, the holder comprising:
 - 4 a hollow distribution frame having an inlet port and a plurality of outlet ports, wherein each of the outlet ports are at the distal end of a respective upright column forming part of the distribution frame; and
 - 5 a plurality of support plates each having an aperture for contacting the outer surface of a respective column of the distribution frame.
- 1 2. The assembly of claim 1, wherein the interior diameter of each respective column of the hollow distribution frame is smaller than the interior diameter of the inlet port.
- 1 3. The assembly of claim 1, wherein the exterior diameter of each respective upright column forming part of the distribution frame is smaller at the outlet port than at the end of the upright column closest to the inlet port.
- 1 4. The assembly of claim 1, further comprising a plurality of imitation candles each having a passage along a major axis for encompassing a substantial portion of a respective upright column.
- 1 5. The assembly of claim 1, wherein the distribution frame comprises a plurality of appendages and the base grate comprises receiving depressions for receiving each respective appendage.
- 1 6. The assembly of claim 1, wherein the distribution frame comprises a plurality of compression fasteners arranged to engage the base grate.
- 1 7. The assembly of claim 1, wherein each of the respective columns comprises a fuel distribution plate proximal to the outlet port.

1 8. The assembly of claim 7, wherein the fuel distribution plate comprises
2 a plurality of spatially arranged openings.

1 9. The assembly of claim 7, wherein each respective column comprises a
2 flame distributor.

1 10. The assembly of claim 1, further comprising:
2 a gas valve coupled to the inlet port, the gas valve responsive to a solenoid
3 electrically coupled to a control circuit.

1 11. The assembly of claim 10, wherein the control circuit comprises a
2 plurality of sensors arranged in close proximity to each respective outlet port.

1 12. The assembly of claim 11, wherein the control circuit closes the gas
2 valve when one of the sensors indicates that a flame is not present at an outlet port.

1 13. The assembly of claim 12, wherein the control circuit comprises an
2 override-to-light switch, wherein when the switch is closed the gas valve remains
3 open regardless of the absence of a flame as indicated by the sensor at an outlet.

1 14. The assembly of claim 10, wherein the control circuit converts light
2 energy into electrical energy when a flame is present and converts heat energy into
3 electrical energy to energize the solenoid.

1 15. The assembly of claim 1, wherein the hollow distribution frame is
2 configured with a coupler configured to engage a connector of a gas supply.

1 16. A modular multiple-mode gas-fueled assembly, comprising:
2 a base grate comprising:
3 a plurality of support members each having a first end suited for
4 contacting the floor of a fire box and an upper end; and
5 a frame coupled to the upper end of the support members;
6 a holder arranged to rest within the base grate, the holder comprising a
7 plurality of longitudinally spaced, transversely disposed cradle members coupled to a
8 hollow distribution frame, the hollow distribution frame having an inlet port and a
9 plurality of outlet ports; and
10 a coupler configured to engage a gas supply.

1 17. The assembly of claim 16, wherein the holder comprises a plurality of
2 appendages and the base grâte comprises a plurality of receiving depressions for
3 receiving each respective appendage.

1 18. The assembly of claim 16, wherein the holder comprises a plurality of
2 compression fasteners arranged to engage the base grate.

1 19. The assembly of claim 16, further comprising:
2 imitation logs arranged to rest on the holder, the imitation logs further
3 arranged to define a void for substantially encompassing the hollow distribution
4 frame.

1 20. The assembly of claim 16, further comprising:
2 a gas valve coupled to the inlet port, the gas valve responsive to a solenoid
3 electrically coupled to a control circuit.

1 21. The assembly of claim 20, wherein the control circuit comprises a
2 plurality of sensors arranged in close proximity to each respective outlet port.

1 22. The assembly of claim 21, wherein the control circuit closes the gas
2 valve when one of the sensors indicates that a flame is not present at an outlet port.

1 23. The assembly of claim 20, wherein the control circuit comprises an
2 override-to-light switch, wherein when the switch is closed the gas valve remains
3 open regardless of the absence of a flame as indicated by the sensor at an outlet.

1 24. The assembly of claim 20, wherein the control circuit converts light
2 energy into electrical energy when a flame is present and converts heat energy into
3 electrical energy to energize the solenoid.

1 25. A method, comprising:
2 providing a support structure for a gas-fueled holder, the gas-fueled holder
3 having an inlet port and a plurality of outlet ports;
4 mounting the gas-fueled holder to the support structure;
5 coupling the gas-fueled holder to a gas supply;
6 providing a flammable gas at the inlet port; and
7 introducing an ignition means at an outlet of the gas-fueled holder.

1 26. The method of claim 25, further comprising substantially surrounding
2 each of the outlet ports with an imitation candle.

1 27. The method of claim 25, further comprising substantially surrounding
2 each of the outlet ports with an imitation log.

1 28. The method of claim 25, further comprising:
2 determining whether a flame is burning at each of the outlet ports; and
3 controllably prohibiting the flow of flammable gas into the inlet port when a
4 flame is not burning at each of the outlet ports.

1 29. The method of claim 28, wherein determining whether a flame is
2 burning at each of the outlet ports comprises converting light energy into electrical
3 energy and controllably prohibiting the flow of flammable gas into the inlet port
4 comprises converting heat energy into electrical energy.

1 30. A holder, comprising:

2 a hollow distribution frame having an inlet port and a plurality of outlet ports,
3 wherein each of the outlet ports are at the distal end of a respective upright column
4 extending from the distribution frame; and

5 a plurality of support plates each having an aperture for contacting the outer
6 surface of a respective column of the distribution frame.

1 31. The holder of claim 30, wherein the interior diameter of each
2 respective column of the hollow distribution frame is smaller than the interior
3 diameter of the hollow distribution frame at the inlet port.

1 32. The holder of claim 30, wherein the exterior diameter of each
2 respective upright column extending from the distribution frame is smaller at the
3 outlet port than where the upright column is attached to the distribution frame.

1 33. The holder of claim 30, further comprising a plurality of imitation
2 candles each having a passage along a major axis for encompassing a substantial
3 portion of a respective column of the distribution frame.

1 34. The holder of claim 30, wherein each of the respective columns
2 comprises a fuel distribution plate proximal to the outlet port.

1 35. The holder of claim 34, wherein the fuel distribution plate comprises a
2 plurality of spatially arranged openings.

1 36. The holder of claim 35, wherein each respective column comprises a
2 flame distributor.

1 37. The holder of claim 30, further comprising:
2 a gas valve coupled to the inlet port, the gas valve responsive to a control
3 circuit electrically coupled to the gas valve.

1 38. The holder of claim 37, wherein the control circuit comprises a
2 plurality of sensors arranged in close proximity to each respective outlet port.

1 39. The holder of claim 38, wherein the control circuit closes the gas valve
2 when one of the sensors indicates that a flame is not present at an outlet port.

1 40. The holder of claim 39, wherein the control circuit comprises an
2 override-to-light switch, wherein when the switch is closed the gas valve remains
3 open regardless of the absence of a flame as indicated by a sensor at an outlet.

1 41. The holder of claim 30, wherein the hollow distribution frame is
2 configured with a coupler configured to engage a connector of a gas supply.

1 42. A method, comprising:
2 providing a gas-fueled holder having an inlet port and a plurality of outlet
3 ports;
4 coupling the gas-fueled holder to a gas supply;
5 providing a flammable gas at the inlet port;
6 substantially surrounding each of the outlet ports with an imitation fuel; and
7 introducing an ignition means at an outlet of the gas-fueled holder.

1 43. The method of claim 42, wherein substantially surrounding each of the
2 outlet ports comprises substantially surrounding each of the outlet ports with an
3 imitation candle.

1 44. The method of claim 42, wherein substantially surrounding each of the
2 outlet ports comprises substantially surrounding each of the outlet ports of the gas-
3 fueled holder with imitation logs.

1 45. The method of claim 42, further comprising:
2 determining whether a flame is burning at each of the outlet ports; and
3 controllably prohibiting the flow of flammable gas into the inlet port when a
4 flame is not burning at each of the outlet ports.

1 46. The method of claim 45, wherein determining whether a flame is
2 burning at each of the outlet ports comprises converting light energy into electrical
3 energy and controllably prohibiting the flow of flammable gas into the inlet port
4 comprises converting heat energy into electrical energy.

1 47. A circuit comprising:
2 a power transistor having an emitter, a base, and a collector; ✓
3 a solenoid coupled to the collector;
4 a plurality of thermocouples coupled between the solenoid and the emitter;
5 and
6 a plurality of photo-sensitive transistors coupled in series between the
7 collector and the base.